CLAIMS

What is claimed is:

1. A method of operating a main terminal which is connected to a telephone network to communicate with the telephone network and selectively connects an external terminal to the telephone network, the method comprising:

obtaining an internal current from a loop voltage generated when the external terminal is in connection with the telephone network, if it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal;

applying the obtained internal current to the main terminal; and

disconnecting the telephone network from the external terminal and instead connecting the telephone network to the main terminal,

wherein while the internal current is flowing in the main terminal, the main terminal maintains the loop voltage generated when the external terminal is in connection with the telephone network.

2. The method of claim 1, wherein the internal current obtaining operation comprises:

determining whether the external terminal is in use;

reading out the loop voltage if it is determined that the external terminal is in use;

storing the read-out loop voltage;

determining whether it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal; and

reading out the stored loop voltage, obtaining the internal current from the loop voltage, and proceeding to the internal current applying operation, if it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal.

3. The method of claim 2, wherein the internal current obtaining operation further comprises:

determining whether the use of the external terminal has been concluded, after the loop voltage storing operation,

connected to the main terminal, and if it is not requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal, the method proceeds to the external terminal use conclusion/non-conclusion determining operation.

4. The method of claim 1, wherein the internal current obtaining operation comprises:

determining whether the external terminal is in use;

determining whether it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal, if it is determined that the external terminal is in use;

reading out the loop voltage if it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal; and

obtaining the internal current from the read-out loop voltage and proceeding to the internal current applying operation.

5. The method of claim 1, wherein the internal current obtaining operation comprises:

determining whether the external terminal is in use;

determining whether it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal if it is determined that the external terminal is in use, otherwise returning to the operation of determining whether the external terminal is in use;

reading out the loop voltage if it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal, otherwise returning to the operation of determining whether it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal; and

obtaining the internal current from the read-out loop voltage.

6. A main terminal which is connected to a telephone network to communicate with the telephone network and selectively connects an external terminal to the telephone network, the main terminal comprising:

a signal checking unit which checks if a switching request signal requesting that the telephone network be disconnected from the external terminal and instead be connected to the main terminal is generated, and outputs the result of the checking as a first control signal;

an internal current production unit which obtains an internal current to be flowed into the main terminal, from a loop voltage generated when the external terminal is in connection with the telephone network, in response to the first control signal, and applies the internal current to the main terminal; and

a connection switching unit which disconnects the telephone network from the external terminal and instead connects the telephone network to the main terminal, in response to a selection signal,

wherein while the internal current is flowing in the main terminal, the main terminal maintains the loop voltage generated when the external terminal is in connection with the telephone network, and the selection signal is generated when the loop voltage is maintained by applying the internal current to the main terminal.

7. The main terminal of claim 6, wherein the internal current production unit comprises:

a first terminal checker which checks use or non-use of the external terminal and outputs the result of the checking as a second control signal;

a first voltage detector which reads out the loop voltage in response to the second control signal;

a storage unit which stores the read-out loop voltage; and

a first current controller which reads out the loop voltage stored in the storage unit in

response to the first and second control signals and applies the internal current obtained from the loop voltage to the main terminal,

wherein the signal checking unit checks the generation or non-generation of the switching request signal in response to the second control signal.

8. The main terminal of claim 6, wherein the internal current production unit comprises:

a second terminal checker which checks use or non-use of the external terminal and outputs the result of the checking as a third control signal;

a second voltage detector which reads out the loop voltage in response to the first control signal; and

a second current controller which obtains the internal current from the read-out loop voltage and applies the internal current to the main terminal,

wherein the signal checking unit checks the generation or non-generation of the switching request signal in response to the third control signal.

9. The main terminal of claim 6, further comprising:

a bridge diode which is connected to the telephone network to extract a current with constant polarity;

a transistor which has a collector coupled to the extracted current and a base coupled to the internal current; and

a resistor coupled between an emitter of the transistor and a reference potential,

wherein the internal current production unit reads out the loop voltage from the extracted current.

10. The main terminal of claim 6, wherein the main terminal is a personal computer or a facsimile.

11. The main terminal of claim 6, wherein the external terminal is a telephone or an automatic answering machine.

12. The main terminal of claim 6, further comprising a controller which checks if the loop voltage generated when the external terminal is in connection with the telephone network is maintained when the internal current flows in the main terminal, and generates the selection signal in response to the result of the checking.

13. The main terminal of claim 6, wherein the internal current production unit generates the selection signal when the internal current is applied to the main terminal.

14. The main terminal of claim 6, wherein the switch request signal comprises an agreed Dual Tone Multi-Frequency code.

15. A main terminal which is connected to a telephone network and selectively

connects an external terminal to the telephone network, the main terminal comprising:

an internal current production unit generating an internal signal from a loop voltage generated when the external terminal is in connection with the telephone network; and

a controller controlling the loop voltage constant according to the internal signal when the telephone network is disconnected from the external terminal and connected to the main terminal.

16. The main terminal of claim 16, wherein the main terminal comprises a first DC supply unit, the external terminal comprises a second DC supply unit generating the loop voltage, and the controller controls the first DC supply unit to maintain the loop voltage constant when the telephone network is switched from the external terminal to the mail terminal.